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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/357,726	07/21/1999	DAVID L. WOOD	1004-3633	9654

22120 7590 09/30/2005

ZAGORIN O'BRIEN GRAHAM LLP  
7600B N. CAPITAL OF TEXAS HWY.  
SUITE 350  
AUSTIN, TX 78731

EXAMINER

MOORTHY, ARAVIND K

ART UNIT PAPER NUMBER

2131

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/357,726

Applicant(s)

WOOD ET AL.

Examiner

Aravind K. Moorthy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-26, 30-35 and 38-41 is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-16, 27-29, 36 and 37 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This is in response to the arguments filed on 5 July 2005.
2. Claims 1-41 are pending in the application.
3. Claims 17-26, 30-35 and 38-41 have been allowed.
4. Claims 10-12 have been objected to.
5. Claims 1-9, 13-16, 27-29, 36 and 37 have been rejected.

### ***Response to Arguments***

6. Applicant's arguments filed 5 July 2005 have been fully considered but they are not persuasive.

On page 10, the applicant requests that the Office indicate the motivation or suggestion in the references for utilizing a firewall in Humpleman et al in a manner that would disclose or suggest the Applicant's claims.

The Office has shown the motivation in the previous office action. The examiner reiterates the motivation as being "a firewall provides a safe passage between the secured network and the party on the public network". The benefits and advantages of using a firewall in a public network are well known in the art. If the Applicant desires, the examiner is willing to provide more examples of motivation of using a firewall in a public network.

On page 11, the applicant argues that Humpleman et al does not disclose or suggest request and response messages. The applicant argues that without disclosing request and responses, Humpleman et al cannot disclose or suggest "the response message corresponding to the validated request message" as recited in claim 1, or "means for proxying an access request by the client targeting the information resource" as recited in claim 27.

The examiner respectfully disagrees. Humpleman et al teaches sending request messages. The Humpleman et al reference also teaches sending response messages. By teaching both these types of messages, it is possible to disclose or suggest “the response message corresponding to the validated request message” as recited in claim 1, or “means for proxying an access request by the client targeting the information resource” as recited in claim 27.

On page 11, the applicant argues that Humpleman et al does not disclose or suggest, “transmitting the formatted request message to a secure data broker for the request message validating”.

The examiner respectfully disagrees. Humpleman et al teaches formatting the message by language translation for inter-device communication. The receiving device can choose to accept the message, thus validating the message.

On page 12, the applicant argues that neither Humpleman et al nor Chen et al discloses or suggests claim 28.

The examiner respectfully disagrees. Humpleman et al teaches the cited limitations of claim 28. Chen was used to teach the security barrier (i.e. firewall). The examiner has provided motivation for anything that was said to be obvious. The examiner requests that the applicant point out which limitations of claim 28 are missing from the Humpleman-Chen combination.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**7. Claims 1, 2, 4-9, 14-16, 27-29, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humpleman et al U.S. Patent No. 6,466,971 B1 in view of Chen et al U.S. Patent No. 5,602,918.**

As to claims 1, 15 and 16, Humpleman et al discloses validating a request message encoded in a structured request language against a predefined request message specification thereof [column 16, lines 21-58]. Humpleman et al discloses transmitting the validated request message [column 16, lines 21-58]. Humpleman et al discloses validating a response message encoded in a structured response language against a predefined response message specification therefor [column 16, lines 21-58]. Humpleman et al discloses that the response message corresponds to the validated request. Humpleman et al discloses transmitting the validated response [column 16, lines 21-58].

Humpleman et al does not teach that the messages are transmitted across a security barrier. Humpleman et al does not teach that the security barrier is a firewall. Humpleman et al does not teach that the security barrier includes a secure communication channel between the servers.

Chen et al teaches a security barrier that is a firewall that includes a secure communication channel [abstract].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Humpleman et al so that after a request message in a structured request language was validated against a predefined request message specification it would have been transmitted across the firewall. After a response message in a structured request language was validated against a predefined request message specification it would have

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been transmitted across the firewall. The firewall would have created a secure communication channel between the servers.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Humpleman et al by the teaching of Chen because a firewall provides a safe passage between the secured network and the party on the public network [column 2 lines 15-21].

As to claim 2, Humpleman et al teaches that the request and response message specifications are predefined in accordance with valid request and response message constraints specific to an information resource [column 15, lines 42-61].

As to claim 4, Humpleman et al teaches the method further comprising:

receiving, at an application proxy, an access request targeting an information resource [column 25, lines 31-62];

formatting the request message in a structured language corresponding to the request message specification [column 25, lines 31-62]; and

transmitting the formatted request message to a secure data broker for the request message validating [column 25, lines 31-62].

As to claim 5, Humpleman et al teaches the method further comprising:

formatting the response message in a structured language corresponding to the response message specification [column 25, lines 31-62]; and

transmitting the formatted response message to a secure data broker for the response message validating [column 25, lines 31-62].

As to claim 6, Humpleman et al teaches accessing an information resource in accordance with the validated request message and preparing the response message in accordance with the access [column 25 line 63 to column 26 line 32]].

As to claim 7, Humpleman et al teaches that the response message is formatted in a structured language corresponding to the response message specification [column 25, lines 31-62].

As to claim 8, Humpleman et al teaches that the request message is formatted in a structured language corresponding to the request message specification [column 25, lines 31-62]. Humpleman et al teaches that the response message is formatted in a structured language corresponding to the response message specification [column 25, lines 31-62].

As to claim 9, Humpleman et al teaches that the structured languages corresponding the request and response message specifications include an extensible markup language (XML) [column 25, lines 31-62].

As to claim 14, Humpleman et al teaches that at least one of the validated request message and the validated response message is encoded in a markup language [column 25, lines 31-62].

As to claims 27-29, Humpleman et al discloses means for proxying an access request by the client targeting information resource and for preparing a request message corresponding to the access request in a structured language corresponding to a predefined request message specification [column 12, lines 16-57]. Humpleman et al discloses means for validating the request message against the predefined request message specification [column 12, lines 16-57].

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Humpleman et al discloses means for validating a response message against a predefined response message specification [column 12, lines 16-57].

Humpleman et al does not teach forwarding only validated request messages across the security barrier. Humpleman et al does not teach forwarding only validated response messages across the security barrier.

Chen et al teaches a security barrier that is a firewall that includes a secure communication channel [abstract].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Humpleman et al so that there would have been means for proxying an access request by the client targeting information resource and for preparing a request message corresponding to the access request in a structured language corresponding to a predefined request message specification. There would have been means for validating the request message against the predefined request message specification. There would have been a client and an information resource separated by a security barrier. Only validated request messages would have crossed the security barrier. There would have been means for validating a response message against a predefined response message specification. Only validated response messages would have crossed the security barrier.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Humpleman et al by the teaching of Chen because a firewall provides a safe passage between the secured network and the party on the public network [column 2 lines 15-21].



As to claim 36, Humpleman et al teaches that the structured request language includes a markup language [column 25, lines 31-62].

As to claim 37, Humpleman et al teaches that the markup language includes extensible markup language [column 25, lines 31-62].

**8. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humpleman et al U.S. Patent No. 6,466,971 B1 and Chen et al U.S. Patent No. 5,602,918 as applied to claim 1 above, and further in view of Applied Cryptography (hereinafter Schneier).**

As to claims 3 and 13, the Humpleman-Chen combination does not teach that at least one of the request and response message specifications is cryptographically secured.

Schneier teaches the use and benefits of encryption, page 2.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time invention was made to have modified the Humpleman-Chen combination so that packet filter instructions are cryptographically secured.

It would have been obvious to have modified the Humpleman-Chen combination by the teaching of Schneier because cryptography offers authentication, integrity and nonrepudiation, page 2.

***Allowable Subject Matter***

**9. Claims 17-26, 30-35 and 38-41 are allowed.**

As to claim 17, prior art teaches predefining a request message specification corresponding to a structured request language. Prior art teaches formatting an access request in accordance with the structure request language. However prior art does not teach or fairly

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discloses supplying the formatted access request to a first intermediary. Prior art does not teach or fairly disclose the intermediary validating the formatted access request in accordance with the request message specification. Prior art does not teach or fairly disclose forwarding the validated access request across the security barrier.

As to claim 22, prior art teaches predefining a response message specification corresponding to a structured response language. Prior art teaches formatting a response to an access request targeting the information resource. Prior art teaches the formatted response being in accordance with the response language. However prior art does not teach or fairly disclose supplying the formatted response to an intermediary. Prior art does not teach or fairly disclose the intermediary validating the formatted response in accordance with the response message specification. Prior art does not teach or fairly disclose forwarding a validated response across the security barrier.

As to claim 24, prior art teaches a security barrier. Prior art teaches a proxy for an information resource. However prior art does not teach or fairly disclose the proxy and the information resource on opposing first and second sides, respectively, of the security barrier. Prior art does not teach or fairly disclose a data broker on the first side of the security barrier, wherein, in response to an access request targeting the information resource, the data broker validates a request message encoded in a structured request language against a predefined request message specification therefor and forwards only validated request messages across the security barrier.

As to claim 30, prior art does not teach or fairly disclose data broker code and parser code executable on a first network server separated from an information resource by a security barrier.

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Prior art does not teach or fairly disclose the data broker code including instructions executable as a first instance thereof to receive access request in a structured language corresponding to a predefined request message specification and to forward validated ones of the access requests across the security barrier toward the information resource. Prior art does not teach or fairly disclose the parser code including instructions executable as a first instance thereof to validate the received access requests against the predefined request message specification.

Any claims not directly addressed are allowed on the virtue of their dependency.

**10. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

As to claim 10, prior art does not teach or fairly disclose that the request and the response message validatings are respectively performed at first and second secure data brokers on opposing sides of the security barrier. Prior art does not teach or fairly disclose that the validated request and response message transmissions are between the first and second secure data brokers.

As to claim 11, prior art does not teach or fairly disclose parsing the message using Data Type Definitions (DTDs) encoding a hierarchy of valid tag-value pairs in accordance with syntax of a valid request message. Prior art does not teach or fairly disclose that if the request message is not successfully parsed, forwarding a response message without transmission of the request message across the security barrier.

As to claim 12, Prior art does not teach or fairly disclose parsing the response message using Data Type Definitions (DTDs) encoding a hierarchy of tag-value pairs in accordance with syntax of a valid response message.

***Conclusion***

**11. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K. Moorthy whose telephone number is 571-272-3793. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aravind K Moorthy AM  
September 26, 2005

CEL  
Primary Examiner  
AU 2131  
9/27/05